REMARKS

Claims 19-38 were pending when the Office Action was mailed. Applicants herein amend claims 19, 24, and 31 and do not cancel or present any new claims. Accordingly, claims 19-38 remain pending.

Applicants would like to thank the Examiner for the consideration extended during the telephone interview conducted on October 2, 2008. During the interview, Examiner Strange, Maurice Pirio, and Anthony Johnson discussed applicants' technology and the differences between applicants' technology and the Geyer reference. As discussed during the interview and to further distinguish over Geyer applicants herein amend each independent claim to recite that at least three computers store a copy of the first system network object. Should the Examiner have any questions or need any additional information regarding the interview, he is encouraged to contact Maurice Pirio.

The Office Action rejects claims 19-38 under 35 U.S.C. § 102(e) over Geyer. Applicants respectfully traverse these rejections. Nevertheless, applicants herein amend the claims to clarify the subject matter for which protection is sought.

Applicants' technology employs uniquely identifiable contexts to monitor the "relationships between multiple system network objects (SNOs) (e.g., application programming interfaces, programming object libraries) and relationships between computers that may have copies of the objects or access to the objects." The context stores information about which computers store copies of an SNO and facilitate the synchronization of the copies by notifying computers of modifications. When a computer requests to modify a copy of an object, applicants' technique determines whether all of the computers storing a copy of the object are available to modify their copy in the manner requested. If so, the request is granted and sent throughout the network so that each copy of the object is modified and the objects remain

synchronized. When at least one of the computers storing a copy of the object is not available to modify its copy, none of the copies are modified. By modifying copies of an object only when all copies can be modified, applicants' technique maintains synchronization between the copies across multiple computers.

Geyer is directed to a technique for sharing content in a collaborative client/server or peer-to-peer environment using "generic shared objects" (GSOs). (Geyer, Abstract). In Geyer's client/server environment, a "collaboration server" manages GSOs by distributing copies to clients for local use, processing requests to modify the GSOs, and notifying interested clients of any modifications. When a client wishes to modify a copy of the GSO, the client sends a request to the collaboration server for authorization. (Geyer, ¶ [0039]). If the client is authorized to modify the GSO, the collaboration server executes the request on the GSO and sends to the client a copy of the modified GSO or a message that the modification was accepted. (Geyer, ¶ [0039]). The collaboration server then notifies other clients of the modification and, in some cases, propagates the changes to the other clients. Thus, Geyer's collaboration server maintains a GSO that is modified as requested by clients and broadcasts the modifications to the client. Geyer, however, does not suggest that the clients' local cache copies are kept synchronized or that the server only updates a GSO when all cached copies are also updated.

In Geyer's peer-to-peer environment, each peer runs an instance of the collaboration server and is, therefore, capable of managing GSOs. When one peer wants to modify a GSO, it notifies the other peers and awaits receipt from the peer that manages that GSO that the requested modification has been processed. The computer that manages the GSO, as in the client-server environment, may reply with a copy of the modified GSO or a message indicating that the modification was accepted and may notify any interested peers if the GSO is modified. The peer that requested the modification, however, does not wait for a reply from any of the other peers.

Claim 19 recites "when at least one computer that stores a copy of the first system network object is not available to modify its copy, not modifying any copies of the first system network object." The Office Action relies on Geyer at ¶ [0041], lines 7-12 and 22-25 as disclosing this feature. Applicants respectfully disagree that Geyer discloses this feature.

Geyer fails to teach or suggest verifying that all computers that store a copy of an object are available to modify their copy prior to modifying a copy of the object. The relied-upon portions of Geyer describe a peer-to-peer collaboration system in which clients maintain local copies of GSOs managed by another client running an instance of a collaboration server. "Whenever one client seeks to modify an object, it notifies the other clients of the modification, and awaits receipt from the other client that the request has been processed at the peer device." (Geyer, ¶ [0041]). The Office Action interprets this as teaching that "the client waits before beginning modification till after the client response to the request, inherently when the client is not available not updating/modifying any of the copies." (Office Action, June 6, 2008). In Geyer, when a client wants to modify a GSO, it notifies other clients of the modification and "awaits receipt from the other client." (Geyer, ¶ [0041], emphasis added). It is clear that the client requesting the modification is only waiting for receipt from one other client, that is, the client that manages the GSO, and not all of the other clients that have a cached copy of the GSO. In order for the requesting client to successfully modify a GSO, it need only receive a receipt from "the other client," and not all clients. Thus, Geyer does not require that all computers storing a copy of a GSO be available prior to modifying a copy of the GSO. Using Geyer's technique, copies of an object may become unsynchronized because Geyer does not check for the availability of all computers storing a copy of the object prior to modifying a copy of the object. Accordingly, claim 19 is patentable over Geyer, as are its dependent claims 20-23. Applicants respectfully request that the Examiner reconsider and withdraw these rejections.

Claim 24 recites "when it is determined that each computer that stores a copy of the first system network object is available to modify its copy, synchronizing the first system network object by notifying each computer that stores a copy of the first system network object of the modification so that each computer can modify its copy of the first system network object." The Office Action relies on Geyer at ¶ [0025] lines 8-11 and ¶ [0039] lines 20-23 as disclosing these features. Applicants respectfully disagree that Geyer discloses these features.

As discussed above, Geyer does not require that all computers storing a copy of a GSO be available to modify their copy prior to modifying the GSO. The relied-upon portions of Geyer describe a server that manages a GSO and broadcasts modifications to the GSO to interested clients, or clients on an access control list for the GSO, to facilitate synchronous conferencing between clients sharing the GSO. However, Geyer neither teaches nor suggests determining whether each computer that stores a copy of a GSO is available to modify its copy prior to modifying the GSO. Because Geyer's technique merely broadcasts modifications without checking the availability of the other computers, copies of a GSO may become unsynchronized. Geyer does not determine whether each computer storing a copy of a GSO is available to modify its copy. Accordingly, claim 24 is patentable over Geyer, as are its dependent claims 25-30. Applicants respectfully request that the Examiner reconsider and withdraw these rejections.

Claim 31 now recites "a component that, when it is determined that each computer that stores a copy of the first system network object is available to modify its copy, synchronizes the copies of the first system network object by sending a notification to each computer that stores a copy of the first network object, so that the first system network object is only modified when each computer that stores a copy of the first system network object is available to modify its copy." As discussed above, Geyer does not determine whether each computer storing a local copy of a GSO is available to modify its copy prior to modifying any other copy of the GSO. Thus,

claim 31 is patentable over Geyer, as are its dependent claims 32-38. Applicants respectfully request that the Examiner reconsider and withdraw these rejections.

Based upon the above amendments and remarks, applicants respectfully request reconsideration of this application and its early allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call Maurice J. Pirio at (206) 359-8548.

Please charge any deficiencies or credit any overpayment to our Deposit Account No. 50-0665, under Order No. 418268847US from which the undersigned is authorized to draw.

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